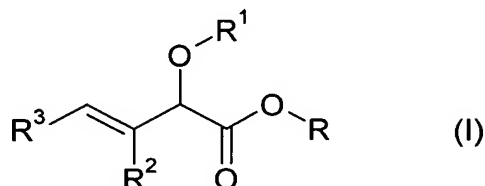


# CLAIMS

## 1. Compound of the formula I:



5 in which

$\text{R}^1$  represents a  $(\text{C}_6\text{-C}_{18})$ aryl group, which is optionally substituted and/or optionally fused to a saturated or unsaturated, monocyclic or polycyclic 5- to 8-membered nucleus optionally containing one or more hetero atoms chosen from O, N and S, the said nucleus itself being optionally substituted; an optionally substituted, saturated, unsaturated or aromatic 5- to 8-membered monocyclic heterocyclic group containing one or more hetero atoms chosen from O, N and S; an optionally substituted  $\text{C}_2\text{-C}_{10}$  alkenyl group; a  $\text{C}_1\text{-C}_{10}$  alkyl group;

$\text{R}^2$  and  $\text{R}^3$  independently represent a hydrogen atom; an optionally substituted  $(\text{C}_6\text{-C}_{18})$ aryl; or alternatively  $\text{R}^2$  and  $\text{R}^3$  together represent a  $\text{C}_3\text{-C}_6$  alkylene chain; and

$\text{R}$  represents a hydrogen atom; a  $\text{C}_1\text{-C}_{10}$  alkyl group; a  $(\text{C}_6\text{-C}_{18})$ aryl( $\text{C}_1\text{-C}_{10}$ )alkyl group;

and the salts thereof with acids or bases,

20 it being understood that the following compounds are excluded from the protection:

when  $\text{R}^3 = \text{phenyl}$ ;  $\text{R} = \text{ethyl}$ ;  $\text{R}^1 = \text{ethyl or phenyl}$ ; and  $\text{R}^2 = \text{H}$ ,

and also the pharmaceutically acceptable derivatives, solvate derivatives and stereoisomers thereof, including mixtures thereof in all proportions.

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2. Compound according to Claim 1 of the formula I in which  $\text{R}^1$  represents a  $(\text{C}_6\text{-C}_{10})$ aryl group, preferably phenyl, which is optionally

substituted and/or fused to a carbocyclic or heterocyclic monocyclic 5- to 8-membered nucleus containing from 0 to 4 hetero atoms chosen from O, N and S, which is itself optionally substituted; an optionally substituted C<sub>2</sub>-C<sub>10</sub> alkenyl group; a hydrogen atom;

- 5 R<sup>2</sup> and R<sup>3</sup> independently represent a hydrogen atom; (C<sub>6</sub>-C<sub>10</sub>)aryl, preferably optionally substituted phenyl; or R<sup>2</sup> and R<sup>3</sup> together represent a C<sub>3</sub>-C<sub>6</sub> alkylene chain; and

R represents a hydrogen atom; a C<sub>1</sub>-C<sub>10</sub> alkyl group; a (C<sub>6</sub>-C<sub>10</sub>)aryl(C<sub>1</sub>-C<sub>10</sub>)alkyl group,

- 10 and also the pharmaceutically acceptable derivatives, salts, solvate derivatives and stereoisomers thereof, including mixtures thereof in all proportions.

3. Compound according to either of the preceding claims, characterised in that when R<sup>1</sup> represents substituted (C<sub>6</sub>-C<sub>10</sub>)aryl, the aryl  
15 nucleus is substituted by one or more of the following radicals:

- trifluoromethyl; a halogen atom; a monocyclic, bicyclic or tricyclic aromatic heterocyclic group comprising one or more hetero atoms chosen from O, N and S; and optionally substituted by one or more radicals T as defined below; a group Het-CO- in which Het represents an aromatic heterocyclic group as defined  
20 above, optionally substituted by one or more radicals T; a C<sub>1</sub>-C<sub>6</sub> alkylenediyl chain; a C<sub>1</sub>-C<sub>6</sub> alkylenedioxy chain; nitro; cyano; (C<sub>1</sub>-C<sub>10</sub>)alkyl; (C<sub>1</sub>-C<sub>10</sub>)alkylcarbonyl; (C<sub>1</sub>-C<sub>10</sub>)alkoxycarbonyl-A- in which A represents (C<sub>1</sub>-C<sub>6</sub>)alkylene, (C<sub>2</sub>-C<sub>6</sub>)alkenylene or a bond; (C<sub>3</sub>-C<sub>10</sub>)cycloalkyl; trifluoromethoxy; di(C<sub>1</sub>-C<sub>10</sub>)alkylamino; (C<sub>1</sub>-C<sub>10</sub>)alkoxy(C<sub>1</sub>-C<sub>10</sub>)alkyl; (C<sub>1</sub>-C<sub>10</sub>)alkoxy; (C<sub>6</sub>-C<sub>18</sub>)aryl  
25 optionally substituted by one or more radicals T; (C<sub>6</sub>-C<sub>18</sub>)aryl(C<sub>1</sub>-C<sub>10</sub>)alkoxy-(CO)<sub>n</sub>- in which n is 0 or 1 and aryl is optionally substituted by one or more radicals T; (C<sub>6</sub>-C<sub>18</sub>)aryloxy(CO)<sub>n</sub>- in which n is 0 or 1 and in which aryl is optionally substituted by one or more radicals T; (C<sub>6</sub>-C<sub>18</sub>)arylthio in which aryl is optionally substituted by one or more radicals T; (C<sub>6</sub>-C<sub>18</sub>)aryloxy(C<sub>1</sub>-  
30 C<sub>10</sub>)alkyl(CO)<sub>n</sub>- in which n is 0 or 1 and in which aryl is optionally substituted by

one or more radicals T; a saturated or unsaturated, monocyclic 5- to 8-membered heterocycle comprising one or more hetero atoms chosen from O, N and S, optionally substituted by one or more radicals T; (C<sub>6</sub>-C<sub>18</sub>)arylcarbonyl optionally substituted by one or more radicals T; (C<sub>6</sub>-C<sub>18</sub>)arylcarbonyl-B-(CO)<sub>n</sub>- in which n is 0 or 1; B represents (C<sub>1</sub>-C<sub>6</sub>)alkylene or (C<sub>2</sub>-C<sub>6</sub>)alkenylene and aryl is optionally substituted by one or more radicals T; (C<sub>6</sub>-C<sub>18</sub>)aryl-C-(CO)<sub>n</sub>- in which n is 0 or 1, C represents (C<sub>1</sub>-C<sub>6</sub>)alkylene or (C<sub>2</sub>-C<sub>6</sub>)alkenylene and aryl is optionally substituted by one or more radicals T; (C<sub>6</sub>-C<sub>18</sub>)aryl fused to a saturated or unsaturated heterocycle as defined above, optionally substituted by one or more radicals T; (C<sub>2</sub>-C<sub>10</sub>)alkynyl; T is chosen from a halogen atom; (C<sub>6</sub>-C<sub>18</sub>)aryl; (C<sub>1</sub>-C<sub>6</sub>)alkyl; (C<sub>1</sub>-C<sub>6</sub>)alkoxy; nitro; carboxyl; (C<sub>1</sub>-C<sub>6</sub>)alkoxycarboxyl; and T can represent oxo in the case where it substitutes a saturated or unsaturated heterocycle; or alternatively T represents (C<sub>1</sub>-C<sub>6</sub>)alkoxycarbonyl(C<sub>1</sub>-C<sub>6</sub>)alkyl; or (C<sub>1</sub>-C<sub>6</sub>)alkylcarbonyl((C<sub>1</sub>-C<sub>6</sub>)alkyl)<sub>n</sub>- in which n is 0 or 1, and also the pharmaceutically acceptable derivatives, salts, solvate derivatives and stereoisomers thereof, including mixtures thereof in all proportions.

4. Compound according to any one of the preceding claims, characterised in that when R<sup>1</sup> is aryl, R<sup>1</sup> represents phenyl, and also the pharmaceutically acceptable derivatives, salts, solvate derivatives and stereoisomers thereof, including mixtures thereof in all proportions.

5. Compound according to any one of the preceding claims, characterised in that R<sup>1</sup> represents (C<sub>1</sub>-C<sub>10</sub>)alkyl, preferably (C<sub>1</sub>-C<sub>3</sub>)alkyl, and R<sup>2</sup> and R<sup>3</sup> represent, independently of each other, H or optionally substituted (C<sub>6</sub>-C<sub>18</sub>) aryl, and also the pharmaceutically acceptable derivatives, salts, solvate derivatives and stereoisomers thereof, including mixtures thereof in all proportions.

6. Compound according to any one of Claims 1 to 5, characterised in that  $R^2$  is H and  $R^3$  represents unsubstituted aryl, preferably unsubstituted phenyl,

5 and also the pharmaceutically acceptable derivatives, salts, solvate derivatives and stereoisomers thereof, including mixtures thereof in all proportions.

7. Compound according to any one of Claims 1 to 3, characterised in  
10 that when R represents ( $C_1$ -  $C_{10}$ )alkylaryl, preferably benzyl,  $R^1$  and  $R^3$  represent unsubstituted aryl, preferably phenyl,

and also the pharmaceutically acceptable derivatives, salts, solvate derivatives and stereoisomers thereof, including mixtures thereof in all proportions.

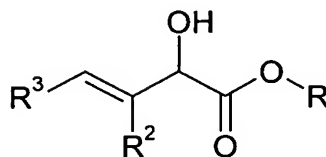
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8. Compounds according to Claim 1 of the formula I, which are:

- methyl (R,S)-2-methoxy-4-phenylbut-3-enoate
- (R,S)-2-methoxy-4-phenylbut-3-enoic acid
- methyl (R,S)-2-propoxy-4-phenylbut-3-enoate
- 20 • (R,S)-2-propoxy-4-phenylbut-3-enoic acid
- benzyl (R,S)-2-phenoxy-4-phenylbut-3-enoate
- methyl (R,S)-2-trifluoromethylphenoxy-4-phenylbut-3-enoate
- (R,S)-2-phenoxy-4-phenylbut-3-enoic acid
- (R,S)-2-trifluoromethylphenoxy-4-phenylbut-3-enoic acid (Z and E forms),
- 25 and also the pharmaceutically acceptable derivatives, salts, solvate derivatives and stereoisomers thereof, including mixtures thereof in all proportions.

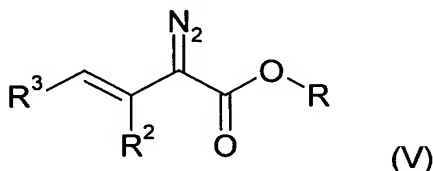
9. Process for the preparation of a compound of the formula I according to Claim 1, characterised in that a halide of the formula  $R^1$ -Y in which

Y represents a halogen atom and R<sup>1</sup> is (C<sub>1</sub>-C<sub>10</sub>)alkyl, is reacted with a compound having the following formula:

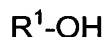


in which R<sup>2</sup>, R<sup>3</sup> and R are as defined in Claim 1 for formula I, in the presence of  
5 silver oxide.

**10.** Process for the preparation of a compound of the formula I according to any one of Claims 1 to 4, in which R<sup>1</sup> represents (C<sub>6</sub>-C<sub>10</sub>)aryl, which is optionally substituted and/or optionally fused to a monocyclic heterocyclic  
10 saturated or unsaturated 5- to 8-membered nucleus containing one or more hetero atoms chosen from O, N and S, which is itself optionally substituted, characterised in that a compound of the formula:



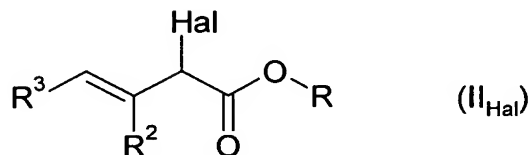
in which R<sup>2</sup>, R<sup>3</sup> and R are as defined in Claim 1 for formula I, is reacted with a  
15 compound of the formula:



in which R<sup>1</sup> is as defined above, in the presence of rhodium tetraacetate.

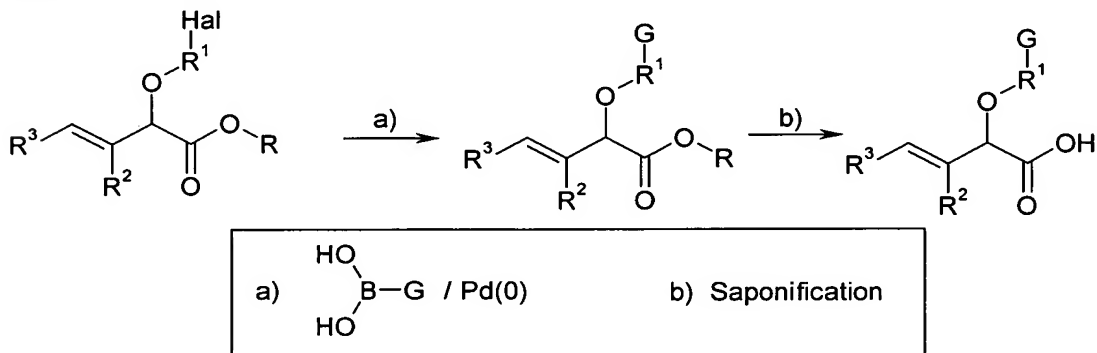
**11.** Process for the preparation of a compound of the formula I  
20 according to any one of Claims 1 to 8, characterised in that a compound of the formula as defined in Claim 9 is reacted with a compound of the formula R<sup>1</sup>-OH in the presence of triphenylphosphine and ethyl diazodicarboxylate.

12. Process for the preparation of a compound of the formula I according to any one of Claims 1 to 8, characterised in that a compound of the formula II<sub>Hal</sub>:



5 in which R<sup>2</sup>, R<sup>3</sup> and R are as defined in Claim 1 for formula I and Hal represents a halogen atom, is reacted with a compound of the formula R<sup>1</sup>-OH.

13. Process for the preparation of a compound of the formula I according to Claim 3, Hal being a halogen atom, according to the following  
10 reaction scheme, the first step being performed in a polar aprotic solvent in the presence of a palladium(0) complex and a base; the second step being a saponification:



15 in which reaction scheme G represents a monocyclic, bicyclic or tricyclic aromatic heterocyclic group comprising one or more hetero atoms chosen from O, N and S, and optionally substituted by one or more radicals T as defined above when R<sup>1</sup>, in the final compound, represents aryl substituted by such a heterocyclic group; or alternatively G represents aryl optionally substituted by one or more radicals T as defined in Claim 3 when, in the final  
20 compound, R<sup>1</sup> represents aryl substituted by an aryl group, which is itself optionally substituted by one or more radicals T;

Hal represents a halogen atom;  
and R, R<sup>2</sup> and R<sup>3</sup> are as defined in Claim 1.

14. Pharmaceutical composition comprising an effective amount of at  
5 least one compound of the formula I according to any one of Claims 1 to 8 or  
obtained via a process according to any one of Claims 9 to 13, in combination  
with at least one pharmaceutically acceptable vehicle.

15. Use of a compound of the formula I according to any one of  
10 Claims 1 to 8 or obtained via a process according to any one of Claims 9 to  
13, for the preparation of a medicament for the prevention or treatment of  
dyslipidaemia, atherosclerosis and diabetes.